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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,698	02/27/2002	Milind M. Kulkarni	CISCP271/5126	6296

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EXAMINER
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SALAD, ABDULLAHI ELMI

ART UNIT	PAPER NUMBER
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2157

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/084,698

Applicant(s)

KULKARNI ET AL.

Examiner

Salad E. Abdullahi

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>544/2005 3-10-03, 9-24-03</u> | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This application has been reviewed. Original claims 1-49 are pending. The rejection cited stated below.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magret U.S. Patent No. 6,856,624[hereinafter Magret] in view of Johansson et al., U.S. Patent Application Publication No. 2002/0080752[hereinafter Johansson]

As per claim 1, Magret discloses in a first one of a plurality of Home Agents supporting Mobile IP, a method of processing a registration request from a Mobile Node that has roamed to a Foreign Agent supporting Mobile IP, comprising:

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receiving a registration request associated with the plurality of Home Agents (see fig. 1 and col. 5, line 62 to col. 6, line 10);

sending the registration request to a second one of the plurality of Home Agents such that the second one of the plurality of Home Agents creates a binding between the Mobile Node and the Foreign Agent (see fig. 8 and col. 10, lines 8-27);

creating a temporary binding between the Mobile Node and the Foreign Agent (see fig. 3 and col. 7, line 56 to col. 8, line 3);

receiving a registration reply from the second one of the plurality of Home Agents (see col. 5, line 62 to col. 6, line 10);

updating the temporary binding to create a permanent binding when the registration reply is received from the second one of the plurality of Home Agents (see col. 7, line 56 to col. 8, line 3); and

sending the registration reply to the Foreign Agent identified in the temporary binding (see col. 5, line 62 to col. 6, line 10).

Marge is silent regarding:

receiving the registration request addressed to a virtual Home Agent address. Johansson, discloses a route optimization technique for a mobile IP communications system including receiving a registration request addressed to a virtual Home Agent address (see fig. 13a and paragraph 0142). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teachings of Johansson such as receiving the registration request addressed to a virtual

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Home Agent address in order to provide redundant mechanism for the home agents in the case of failure.

As per claim 2, Magret discloses the method as recited in claim 1, wherein the temporary binding comprises an identifier associated with the Mobile Node, an IP address associated with the Foreign Agent, and an IP address associated with the second one of the plurality of Home Agents (see col. 6, line 65 to col. 7, line 9).

As per claim 3-9, Magret discloses the method as recited in claim 1, wherein the permanent binding comprises an identifier associated with the Mobile Node, an IP address associated with the Foreign Agent, an IP address associated with the second one of the plurality of Home Agents, and a registration lifetime (see col. 6, line 65 to col. 7, line 9).

As per claims 10-11, Johansson discloses the method as recited in claim 1, wherein the registration request specifies a destination MAC address equal to a MAC address assigned to the second one of the plurality of Home Agents (see paragraph 0086)

As per claims 12-14, Johansson discloses the method as recited in claim 1, wherein the registration request specifies a destination IP address as the virtual Home Agent address (see fig. 13a and paragraph 0142).

As per claims 15-16, Johansson discloses the method as recited in claim 1, further

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comprising: advertising a virtual network associated with the virtual Home Agent address, wherein advertising comprises sending a routing table update (see paragraph 0018)

As per claims 17, and 21-25 Johansson discloses the method as recited in claim 1, further comprising: sending at least one of Home Agent health and load information associated with the first one of the plurality of Home Agents to one or more of the plurality of Home Agents (see fig. 14 and paragraph 0163).

As per claims 18-20, Johansson discloses the method as recited in claim 15, further comprising: receiving an advertisement from one of the plurality of Home Agents, the advertisement advertising the virtual network associated with the virtual Home Agent address. (see fig. 3a and paragraphs 0018 and 0035

As per claims 26-27, Johansson discloses the method as recited in claim 1, further comprising: sending one or more bindings to one or more backup Home Agents, the one or more bindings being associated with one or more of the plurality of Home Agents (see fig. 13a and paragraph 0142).

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As per claim 28, Magret discloses the method as recited in claim 1, further comprising:

when the registration request is received, searching for a binding for the Mobile

Node(see col. 5, line 62 to col. 6, line 10);

when a binding for the Mobile Node exists, identifying the second one of the plurality of

Home Agents in the binding prior to sending the registration request to the second one

of the plurality of Home Agents(see col. 5, line 62 to col. 6, line 10).; and

when a binding for the Mobile Node does not exist, selecting the second one of the

plurality of Home Agents prior to sending the registration request to the second one of

the plurality of Home Agents. (see col. 5, line 62 to col. 6, line 10).

As per claim 29, In a Home Agent supporting Mobile IP, a method of processing a

registration request from a Mobile Node that has roamed to a Foreign Agent supporting

Mobile IP, comprising:

receiving a registration request from one of a plurality of Home Agents, the registration

request being addressed associated with the plurality of Home Agents(see fig. 8 and

col. 10, lines 8-27);

processing the registration request such that a binding between the Mobile Node and

the Foreign Agent is created(see col. 5, line 62 to col. 6, line 10); and

Marge is silent regarding:

receiving the registration request addressed to a virtual Home Agent address and

sending a registration reply to the primary one of the plurality of Home Agents.

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Johansson, discloses a route optimization technique for a mobile IP communications system including receiving a registration request addressed to a virtual Home Agent address and sending a registration reply to the primary one of the plurality of Home Agents (see fig. 13a and paragraph 0142). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the teachings of Johansson such as receiving the registration request addressed to a virtual Home Agent address in order to provide redundant mechanism for the home agents in the case of failure.

As per claims 30-31, Johansson discloses the method as recited in claim 29, wherein the registration request specifies a destination MAC address equal to a MAC address assigned to the Home Agent (see paragraph 0086)

As per claim 32-42, Johansson discloses the method as recited in claim 29, wherein the registration request specifies a destination IP address as the virtual Home Agent address (see fig. 13a and paragraph 0142).

As per claims 43-49, the claims include features analogous with features in claims 1 and 29, thus claims 43-49 are rejected same rational as claims 1 and 29.

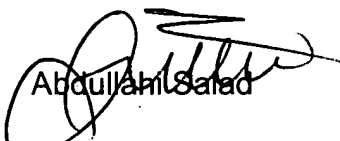


***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salad E. Abdullahi whose telephone number is 571-272-4009. The examiner can normally be reached on 8:30 - 5:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Abdullahi Salad  
5/10/2005